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Dated: March 10, 2008 Signature: /Brian M. McGuire/  
(Brian M. McGuire)

Docket No.: M1909.1125  
(PATENT)

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Patent Application of:  
Takahiro Hosomi

Application No.: 10/798,307

Confirmation No.: 5792

Filed: March 12, 2004

Art Unit: 2617

For: WIRELESS TERMINAL DEVICE

Examiner: A. Gonzalez

**BRIEF IN SUPPORT OF PRE-APPEAL BRIEF REQUEST FOR REVIEW**

U.S. Patent and Trademark Office  
220 20th Street S.  
Customer Window, Mail Stop AF  
Crystal Plaza Two, Lobby, Room 1B03  
Arlington, VA 22202

Dear Sir:

Applicant respectfully requests a review of the legal and factual bases for the rejections in the above-identified patent application. Pursuant to the guidelines set forth in the Official Gazette Notice of July 12, 2005, for the Pre-Appeal Brief Conference Program, favorable reconsideration of the subject application is respectfully requested in view of the following remarks.

Claims 1-8 are pending in the application. The claims are directed towards a wireless terminal device that comprises a plurality of antennas, a radio section, a reception level measuring section, and a controller. The reception level measuring section measures a reception level of an antenna that is currently receiving radio waves. When a measured value of the reception level of the antenna currently receiving radio waves, the value being measured by the reception level measuring section, is equal to or less than a predetermined threshold value, the controller temporarily interrupts transmission and reception for a period of time without disconnection in data communication. In this time period, the controller switches from the antenna currently receiving

radio waves to another antenna. Subsequently, the reception level measuring section measures a value of a reception level of this other antenna to compare the first measured value with the second measured value of the reception level of the other antenna. On the basis of the comparison, the controller switches to the antenna with the higher measured value.

Claim 1 is the sole independent claim. An amendment filed on April 6, 2007 made a clarifying amendment to claim, but the amendment did not change the scope of the claims.<sup>1</sup> The rejection and the invention will be addressed with respect to claim 1.

1. (Previously Presented) A wireless terminal device, comprising:

a plurality of antennas;

a radio section for receiving radio waves from a base station via one of the antennas;

a reception level measuring section for measuring a reception level of the antennas including an antenna that is currently receiving and/or transmitting radio waves; and

a controller:

wherein the controller temporarily interrupts transmission and reception for a period of time without disconnection in data communication,

the reception level measuring section measures at least one of the antennas' reception level except the receiving and/or transmitting antenna in the period of time, and

the controller switches antennas when the reception level of the receiving and/or transmitting antenna is equal to or less than the reception level measured in the period of time.

In the Advisory Action dated February 5, 2008 the Examiner continues to allege that "the combined cited prior art teach the elements and subject matter of the present application, that is, wireless terminal with a plurality of antennae receiving radio waves performing signal reception and transmission measurements, utilizing techniques as burst transmission and a d [sic] compressed

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<sup>1</sup> The Examiner agreed to this position, as reflected in the removal of finality referred to in interview summary mailed on June 25, 2007, but now appears to take a contrary position in the Advisory Action.

mode, taught by Ramesh, Scherzer and Steudle, as cited in the Office Action.” The Final Office Action and the Advisory Action in this case, by the Examiner’s own admission in the Advisory Action, does not address the Applicant’s arguments raised in both its initial and subsequent responses, but instead “recapitulated on the main elements taught by the prior art of record.” Accordingly, the Applicants have had no hearing on its arguments and thus presents them again for reconsideration.

Claim 1 is the sole independent claim in the present application. The combination of Ramesh and Steudle form the basis for all of the rejections under 35 U.S.C. § 103 in the present application.<sup>2</sup> Claim 1 recites that “the reception level measuring section measures at least one of the antennas’ reception level *except the receiving and/or transmitting antenna in the period of time.*” The “period of time” in this limitation refers to claim 1’s recitation that “the controller temporarily interrupts transmission and reception *for a period of time without disconnection in data communication.*” Accordingly, claim 1 requires that the reception level measuring section measures at least one of the antennas’ reception level except the receiving and/or transmitting antenna in the period of time in which transmission and reception is temporarily interrupted without disconnection in data communication.

The Examiner alleges that column 4, lines 10-19, column 7, lines 5-17, column 8, lines 30-40 and 51-67, and column 9, lines 1-9 of Ramesh show a measuring section which is capable of performing transmission and reception diversity and the use of strategic timing to minimize the impact of measurements on the proper operation of communications. The Examiner admits at page 4, Ramesh does not teach interrupting transmission and reception for a period of time without disconnection in data communication, alleging column 1, lines 58-66 cure Ramsesh’s deficiency. Yet, Ramesh, even when combined with Steudle, fails to teach or suggest this limitation. Moreover, Ramesh teaches away from the combination.

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<sup>2</sup> Claims 1-2, 4, and 6 are rejected under 35 U.S.C. § 103(a) over U.S. Patent No. 6,212,368 to Ramesh et al. (“Ramesh”) in view of U.S. Patent No. 7,133,382 to Steudle (“Steudle”) and further in view of U.S. Patent No. 6,799,026 to Scherzer et al. (“Scherzer”). Claim 3 stands rejected under 35 U.S.C. § 103(a) over Ramesh in view of Steudle and Scherzer and further in view of U.S. Patent No. 7,079,507 to Toskala et al. (“Toskala”). Claim 5 is rejected under 35 U.S.C. § 103(a) over Ramesh in view of Steudle and Scherzer and further in view of U.S. Patent No. 6,771,944 to Harano (“Harano”).

As column 8 of Ramesh explains, before a first antenna switches to a second antenna to make strength indication measurements, the values of channel taps and positions on the signal received from the first antenna have to be stored, and once the phone switches back to the first antenna, those channel taps are reloaded so signal reception can commence from that point. **Thus, while the reception level is measured on Ramesh's second antenna, data communication is interrupted.** Yet even though Ramesh's data communication is interrupted, transmission is not, as Ramesh urges or teaches **maintaining transmission and reception** of bits of information during antenna strength measurement in the very portions of the reference cited by the Examiner. Indeed, at column 4, lines 10-19 Ramesh states ". . . measuring is timed to coincide with the transmission of invalid power control bits." If measuring coincides with transmission, then transmission is not interrupted.

Moreover, at column 7, lines 5-17 Ramesh urges "in other words, reception of the power control bits is important to the proper operation of the system. Hence, it might not be optimal to cease reception of the power control bits . . . [t]he terminal strategically chooses to measure signal strength only during the last eight bits of the last sub-set before the desired frame." Thus, not only does Ramesh fail to teach claim 1's recitation that "the controller temporarily interrupts transmission and reception for a period of time without disconnection in the data communication" and measuring "at least one of the antennas' reception level except the receiving and/or transmitting antenna in the period of time," but it actually teaches away from this limitation by urging continued transmission of certain information, *e.g.*, of power control bits. This "strategic measurement" in Ramesh cited by the Examiner is expressly timed to occur during the transmission and reception of bits of information. Thus there is no teaching for temporarily interrupting transmission and reception for a period of time without disconnection in the data communication and performing measurement during that period of time, as required by claim 1; rather, Ramesh teaches away from this limitation.

Steudle does not cure Ramesh's deficiency. Column 1, lines 58-66 and column 3, line 20-32 of Steudle, cited by the Examiner, show a WCDMA system where transmission is interrupted by generating a frame in a gap during which transmission is interrupted. Yet as Steudle explains,

Steudle uses this gap to perform parameter measurements for the purposes of handover in **a one receiver mobile station**. See column 1, lines 42-56 and column 2, lines 29-34, which the Examiner only partially cites, omitting the portion that contradicts his argument: "Thus, the parameter measurements described above can be performed in a typical one-receiver mobile station only when there is no transmission." Column 1, lines 52-54. In dual receiver mobile stations, Steudle explains that transmission and reception is maintained during measurement: "This also applies to dual-receiver mobile stations when one set of transmission/reception means transmits on almost the same frequency as a second set of transmission/reception means performs measurements." Column 1: lines 54-57. Thus Steudle only shows taking measurements **of the same antenna** on which transmission and reception is performed during the gap. Thus, Steudle does not show "the reception level measuring section measures at least one of the antennas' reception level **except the receiving and/or transmitting antenna in the period of time,**" as required by independent claim 1.

As nothing in Scherzer cures the deficiency of Ramesh and Steudle as applied to independent claim 1, Applicant urges that claim 1 is in condition for allowance. As all the dependent claims ultimately depend from independent claim 1, and as nothing in the cited art of record cures the deficiency of Ramesh and Steudle as applied to independent claim 1, Applicant urges all the claims 1-2, 4, and 6-8 are presently in condition for allowance and respectfully requests reconsideration and withdrawal of the rejections thereto.

Dated: March 10, 2008

Respectfully submitted,

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